

CLAIMS

[027] What I claim as my invention is:

[028] 1. A telecommunication system including one or more wireless base stations, and one or more packet-based networks;

where the term "base station" refers to fixed wireless equipment that is connected to a telecommunications network, and may include a combination of Base Transceiver Stations (BTS), Base Station Controllers (BSC), and Mobile Switching Centers (MSC);

where each of said base stations is used to establish radio-frequency communication with one or more wireless terminals over an air interface, each of said base stations being capable of exchanging with one or more wireless terminals, data packets of compressed audio information;

where said packet networks use the internet protocol to transfer voice data to and from said wireless terminals;

where said base stations include vocoders that decode into Pulse Code Modulation the voice traffic received from said wireless terminals;

where said base stations include vocoders that encode Pulse Code Modulated voice traffic destined for said wireless terminals into the format specific to said wireless terminals' air interface;

where said base stations have a mechanism for bypassing the encoding and decoding of voice traffic going to and coming from said wireless terminals, respectively;

where said packet networks connect to one or more Public Switched Telephone Networks

or other telecommunication equipment that uses Pulse Code Modulation for representation of voice traffic;

where said packet networks are capable of instructing the vocoders in said base stations to bypass the encoding and decoding of voice traffic going to and coming from said wireless terminals respectively, said encoding and decoding being performed by said packet networks as needed.

[029] 2. A telecommunication network as defined in claim 1, wherein said packet network is an Asynchronous Transfer Mode (ATM) network.

[030] 3. A telecommunication network as defined in claim 1, wherein said base stations also include echo cancellers wherein;

said packet networks can instruct said base stations to also disable the echo cancellers corresponding to said vocoders when said vocoders are being bypassed.

[031] 4. A telecommunication network as defined in claim 3, wherein said packet networks are Asynchronous Transfer Mode (ATM) networks.

[032] 5. A telecommunication network including one or more wireless base stations, and one or more nodes;

where the term "base station" refers to fixed wireless equipment that is connected to a telecommunications network, and may include a combination of Base Transceiver Stations (BTS), Base Station Controllers (BSC), and Mobile Switching Centers (MSC);

where each of said base stations is used to establish radio-frequency communication with one or more wireless terminals over an air interface, each of said base stations being capable of exchanging with one or more wireless terminals, data packets of compressed audio information;

where said nodes can be used to receive calls from said wireless terminals and to place calls to said wireless terminals;

where said nodes are not wireless terminals;

where said base stations include vocoders that decode into Pulse Code Modulation the voice traffic received from said wireless terminals;

where said base stations include vocoders that encode Pulse Code Modulated voice traffic destined for said wireless terminals into the format specific to said wireless terminals' air interface;

where said base stations have a mechanism for bypassing the encoding and decoding of voice traffic going to and coming from said wireless terminals, respectively;

where said nodes are capable of instructing the vocoders in said base stations to bypass the encoding and decoding of voice traffic going to and coming from said wireless terminals respectively, said encoding and decoding being performed by said nodes as needed.

[033] 6. A telecommunication network as defined in claim 5, wherein said base station equipment also includes echo cancellers wherein;

said nodes can instruct said base stations to also disable the echo cancellers corresponding to said vocoders when said vocoders are being bypassed.